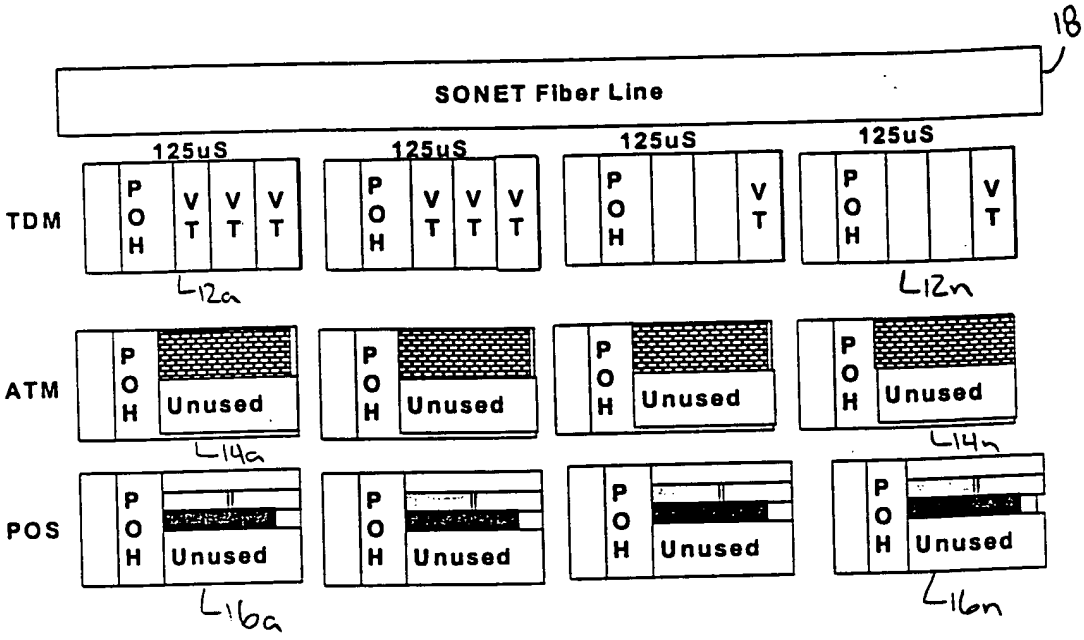
18
SONET Fiber Line
125uS
125uS
125uS
125uS
TDM
POH
VT
VT
VT
12a
12n
ATM
POH
Unused
14a
14n
POS
POH
Unused
16a
16n

FIG.1

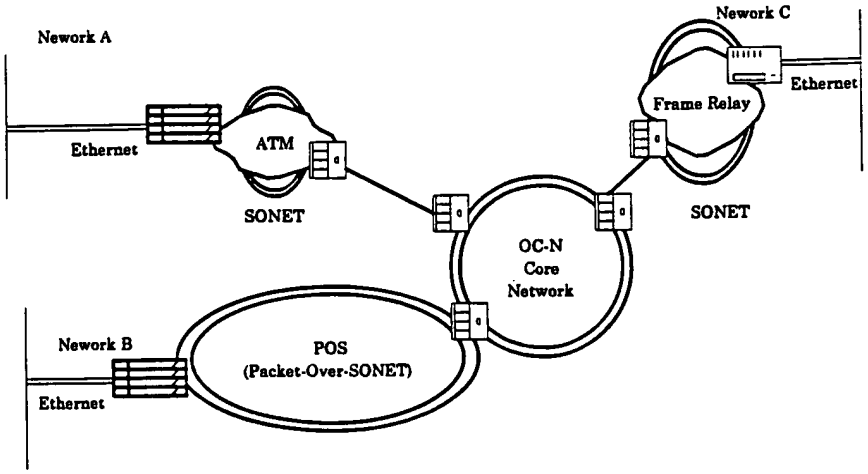
40
Nework A
Ethernet
ATM
SONET
Nework C
Ethernet
Frame Relay
SONET
OC-N
Core
Network
Nework B
Ethernet
POS
(Packet-Over-SONET)

FIG. 2

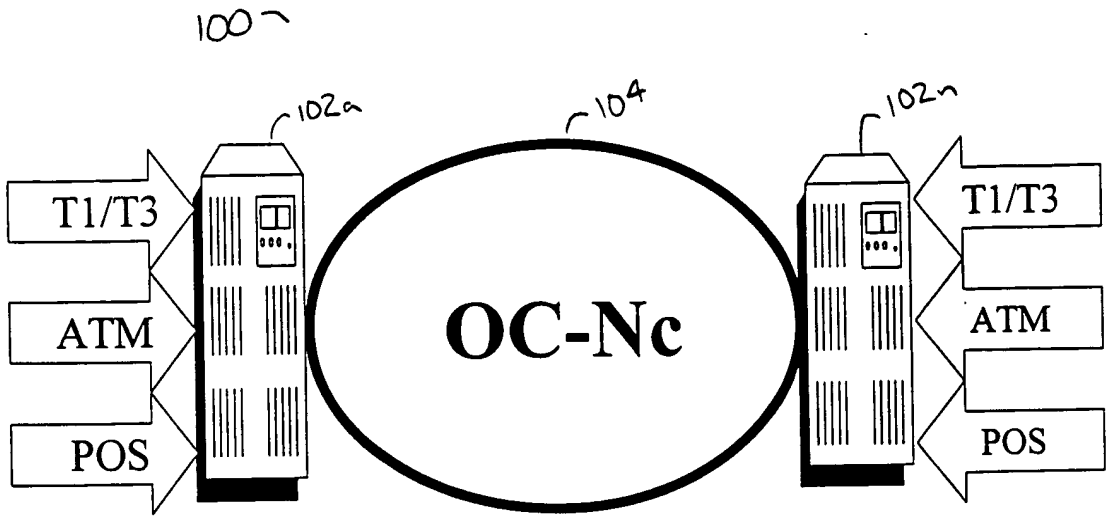
100
102a
104
102n
T1/T3
ATM
POS
OC-Nc
T1/T3
ATM
POS

FIG. 3

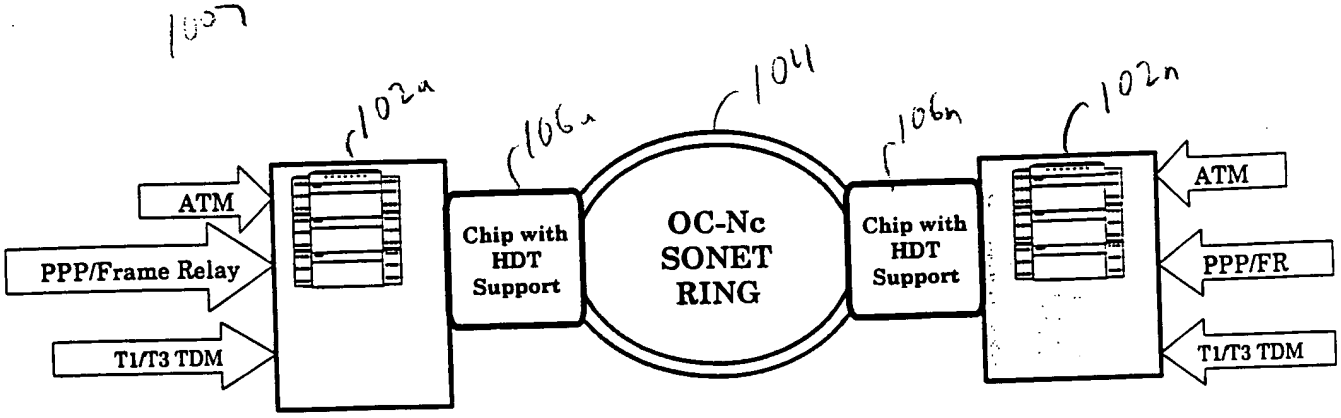
100
102a
106a
104
106n
102n
ATM
PPP/Frame Relay
T1/T3 TDM
Chip with HDT Support
OC-Nc SONET RING
Chip with HDT Support
ATM
PPP/FR
T1/T3 TDM

FIG. 4

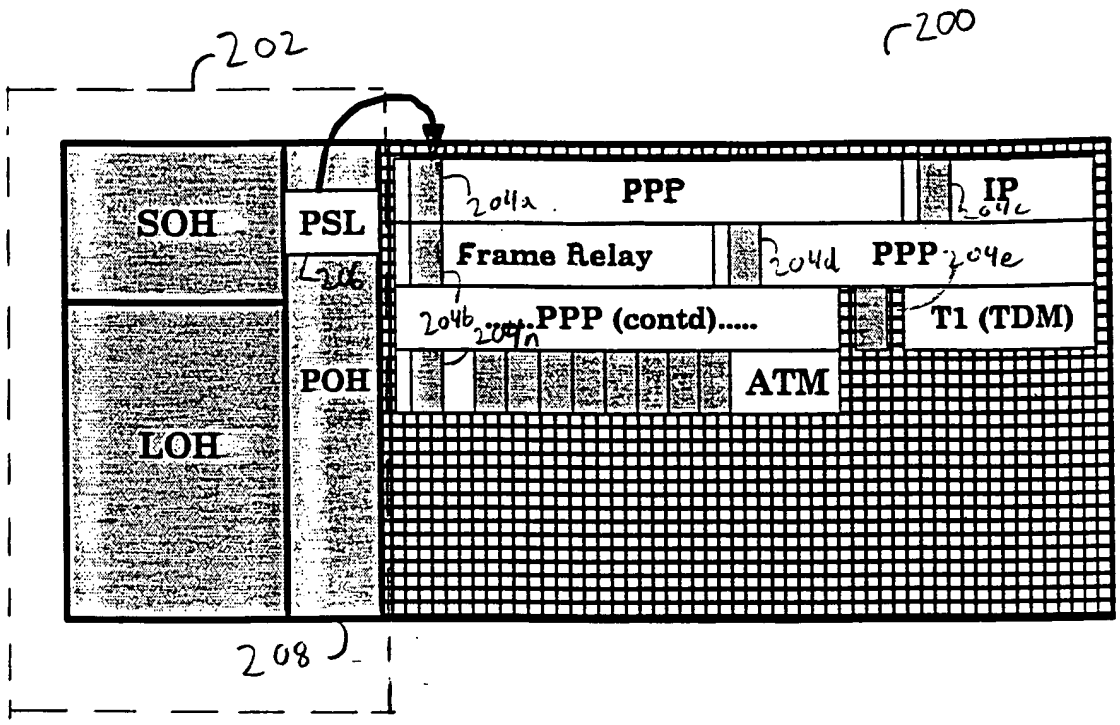
202
200
SOH
PSL
206
LOH
POH
208
204a
PPP
IP
204c
Frame Relay
204d
PPP
204e
204b
204n
PPP (contd).....
T1 (TDM)
ATM

FIG. 5

150

Packet Identification (152)	MPLS Labels (154)	Layer 2 Addresses (156)		Data Identifier (158)	Layer 3 addresses (160)	User Data (162)	Error Detection (164)
Identify the kind of packet being carried (Ethernet, PPP, frame relay, etc.)	One or more 32-bit words	Destination MAC (6 bytes)	Source MAC (6 bytes)	Protocol Identifier or IEEE802.3 Length Field (2 bytes)	…Network Layer addresses…	..Payload..	CRC

FIG. 6

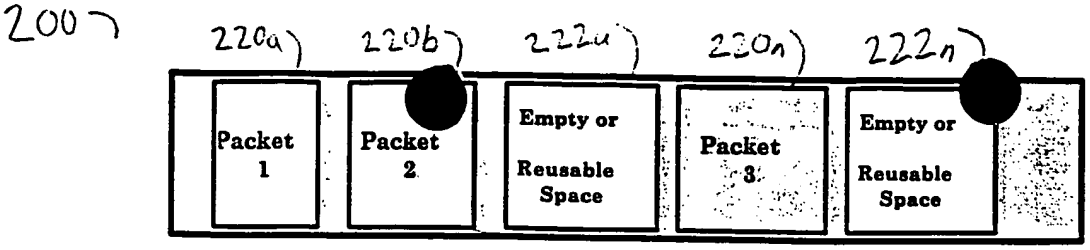

FIG. 7

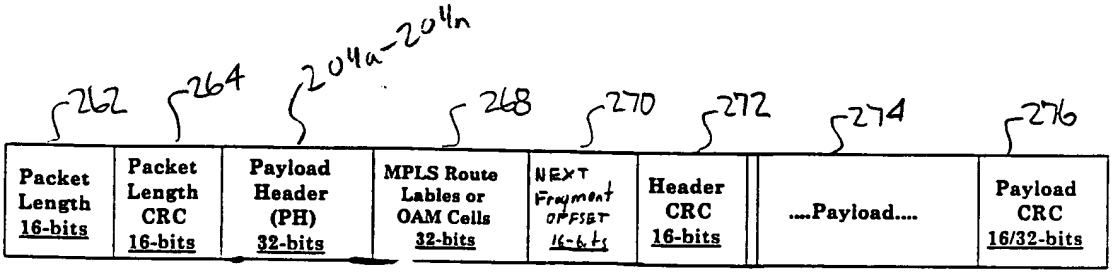

FIG. 8

204a

292 Unused D31:D20	290 Padding D18:D19	288 Fragment ID D17:D16		286 Header Length D15:D8	284 Packet Reuse D7		282 Header Data D6:D4		280 Packet Identifier D3:D0	
Reserved for Future Use	00: No Pad 01: 1-byte pad 10: 2-byte pad 11: 3-byte pad	00 01 10 11	No Frag. Initial Pkt Cont. Pkt End Pkt	Length of Header Bytes	0 1	No Yes	000 001 010 011-111	None MPLS OAM (Future Use)	0000 0001 0010 0011 0100 0101 0111 - 1111	Null Packet ATM Cells PPP IP Ethernet PDH (Future use)

FIG. 9

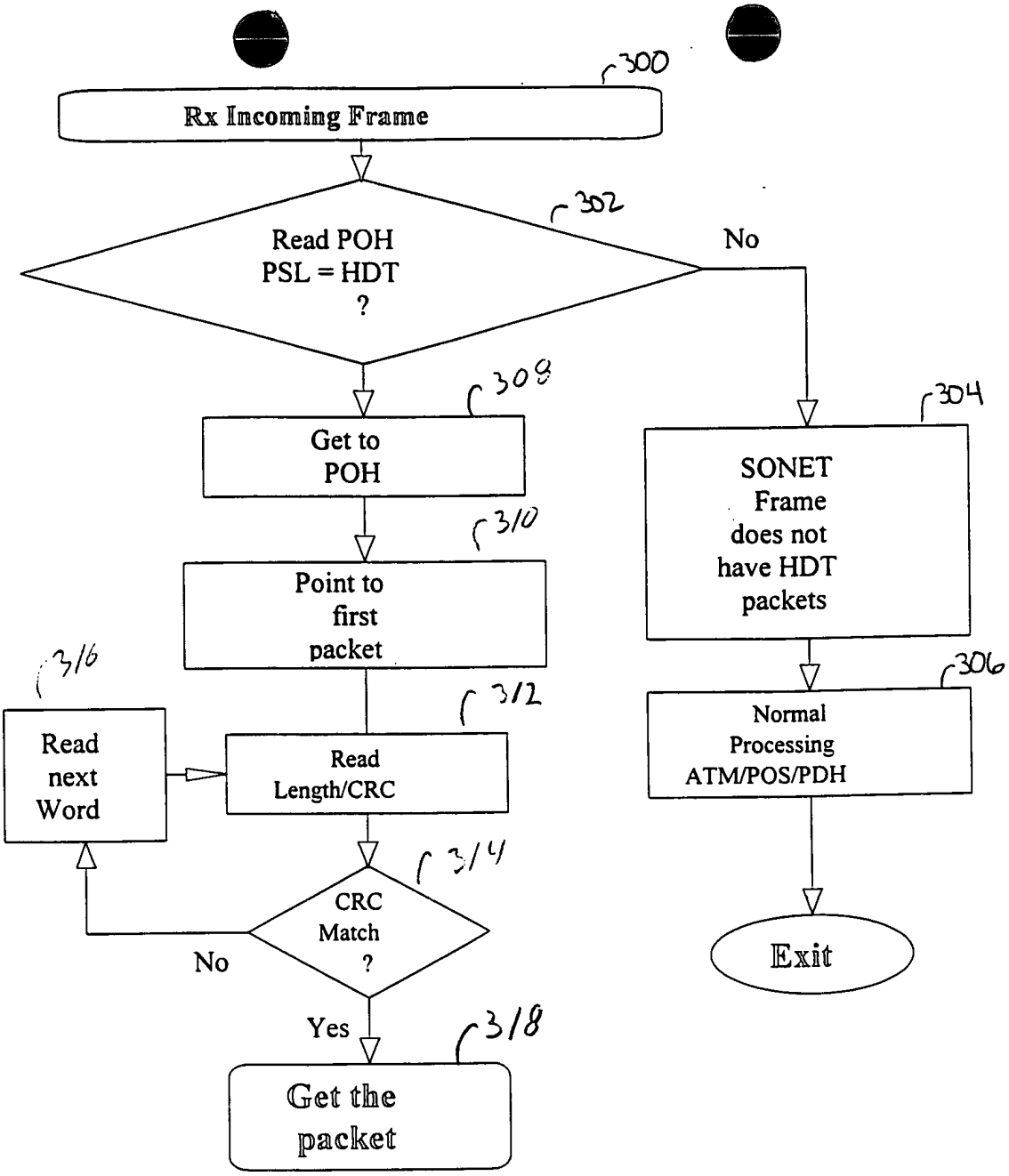
300
Rx Incoming Frame
302
Read POH
PSL = HDT
?
No
308
Get to
POH
310
Point to
first
packet
312
Read
Length/CRC
316
Read
next
Word
314
CRC
Match
?
No
Yes
318
Get the
packet
304
SONET
Frame
does not
have HDT
packets
306
Normal
Processing
ATM/POS/PDH
Exit

FIG. 10

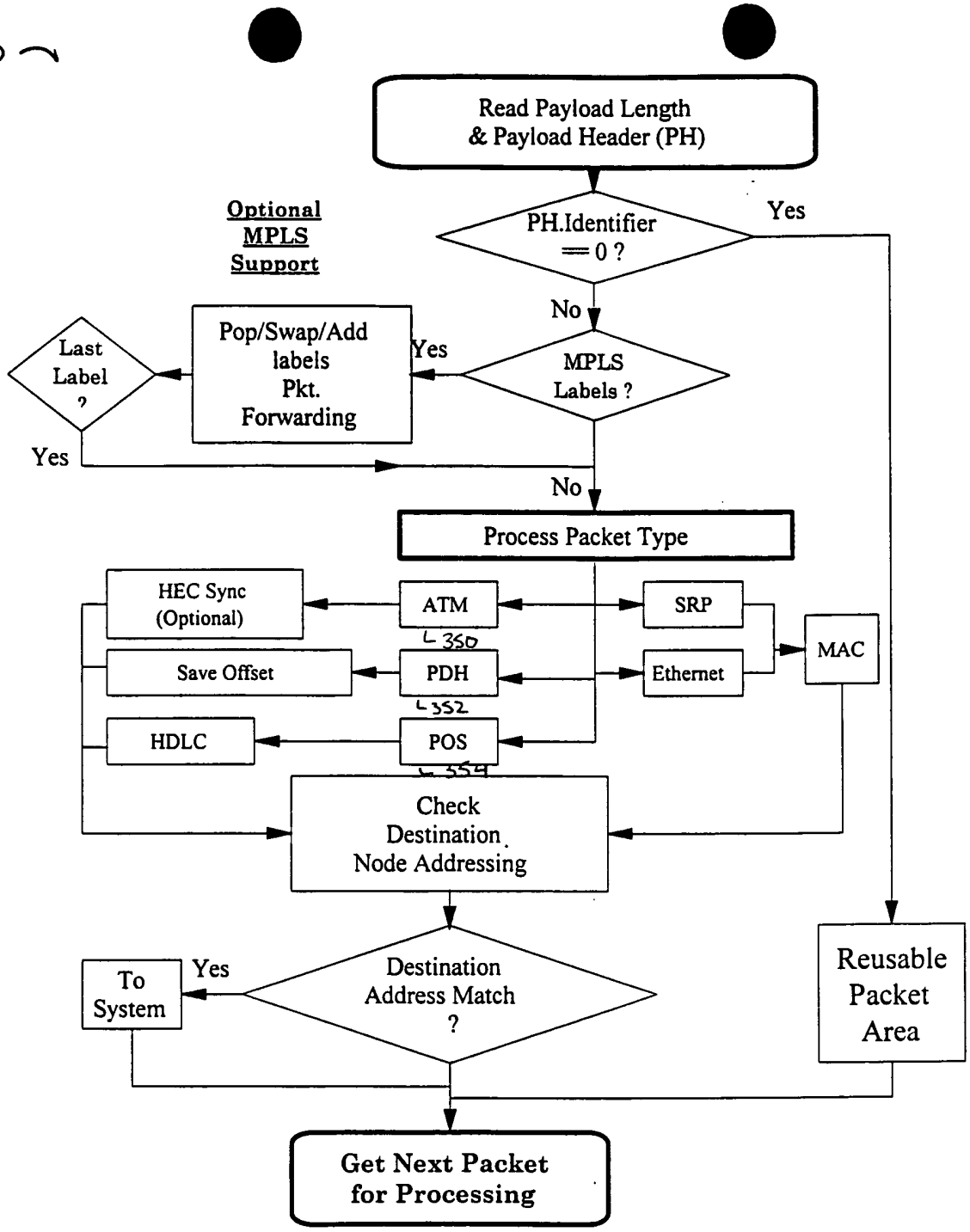
320
Read Payload Length & Payload Header (PH)
Optional MPLS Support
PH.Identifier == 0 ?
Yes
No
MPLS Labels ?
Yes
Pop/Swap/Add labels Pkt. Forwarding
Last Label ?
Yes
No
Process Packet Type
HEC Sync (Optional)
ATM
SRP
350
Save Offset
PDH
Ethernet
MAC
352
HDLC
POS
354
Check Destination Node Addressing
To System
Yes
Destination Address Match ?
Reusable Packet Area
Get Next Packet for Processing

FIG. 11

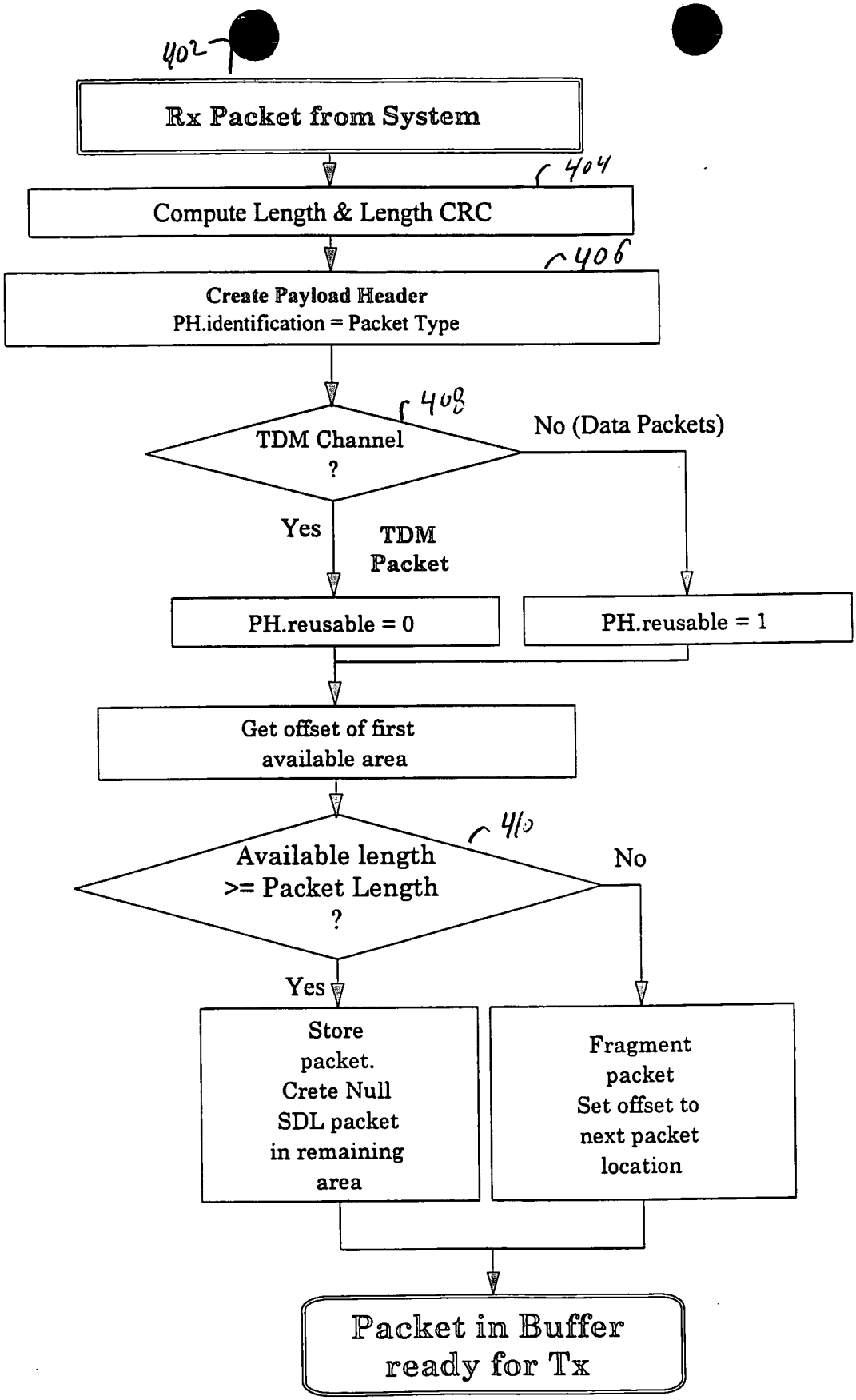
400
402
Rx Packet from System
404
Compute Length & Length CRC
406
Create Payload Header
PH.identification = Packet Type
408
TDM Channel ?
No (Data Packets)
Yes
TDM Packet
PH.reusable = 0
PH.reusable = 1
Get offset of first available area
410
Available length >= Packet Length ?
No
Yes
Store packet. Crete Null SDL packet in remaining area
Fragment packet Set offset to next packet location
Packet in Buffer ready for Tx

FIG. 12

5007

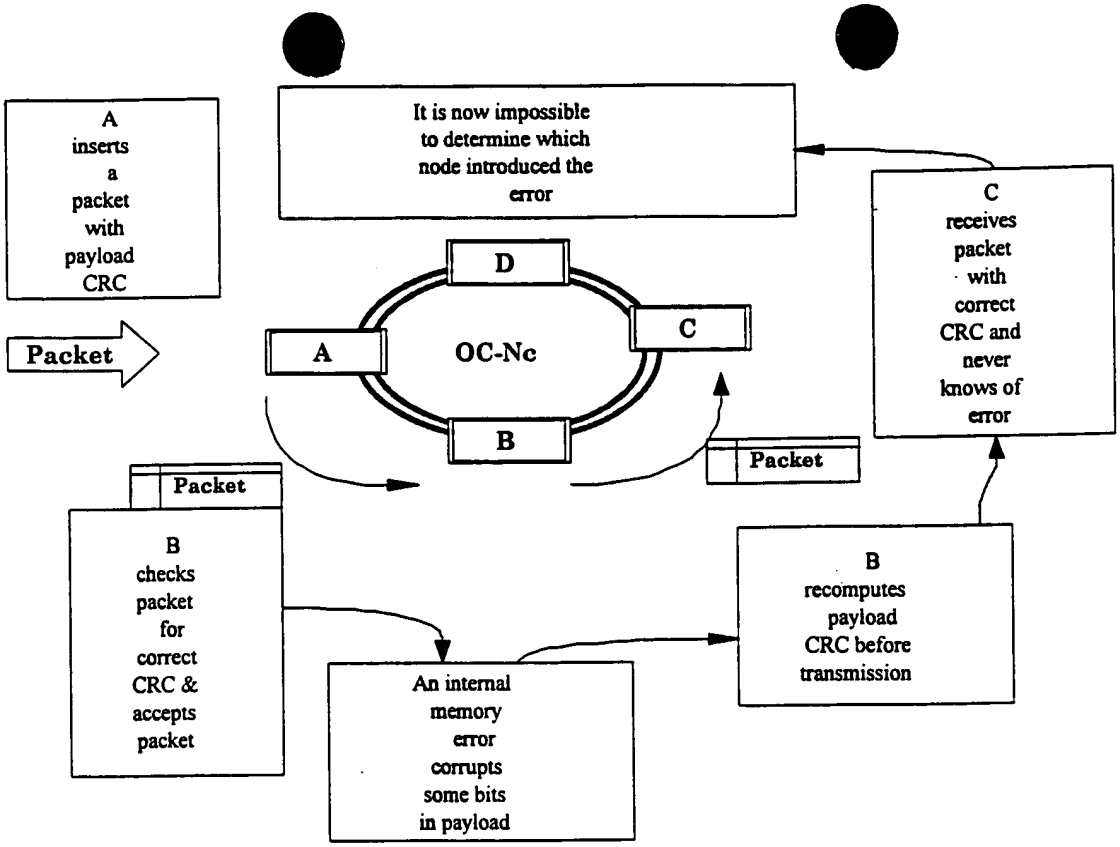

FIG. 13

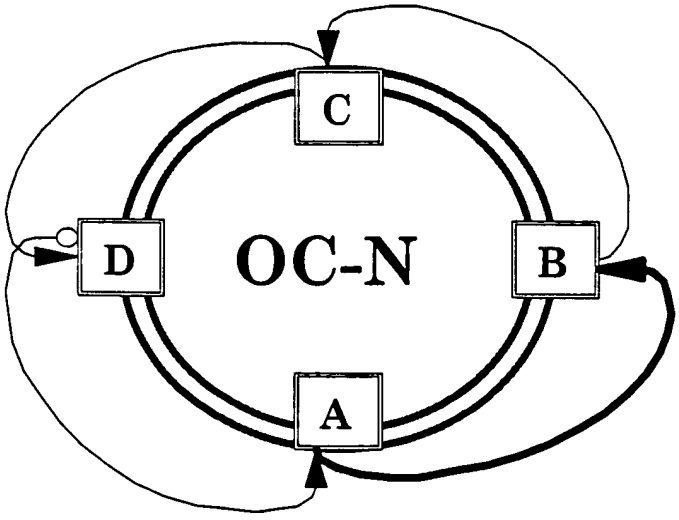

FIG. 14